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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/485,443	05/01/2000	WEI CHEN	Q57774	1926
7:	590 08/12/2003			
SUGHRUE MION ZINN MACPEAK & SEAS 2100 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20037-3202			EXAMINER	
			KING, JUSTIN	
			ART UNIT	PAPER NUMBER
		·	2181	
			DATE MAILED: 08/12/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

			•	$\mathcal{L}$				
Office Action Summary		Application No.	hpplicant(s)					
		09/485,443	CHEN ET AL.	•				
		Examin r	Art Unit					
		Justin I. King	2181					
The MAILING DATE of this communication app ars on the cover sheet with the correspond nce address Period for Reply								
A SH THE - Exte after - If the - If NO - Failu - Any	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. e period for reply specified above is less than thirty (30) days, a reply of period for reply is specified above, the maximum statutory period we are to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	86(a). In no event, however, r within the statutory minimum rill apply and will expire SIX (6 cause the application to become	nay a reply be timely filed  of thirty (30) days will be considered time i) MONTHS from the mailing date of this ome ABANDONED (35 U.S.C. § 133).	ely. communication.				
1)🛛	Responsive to communication(s) filed on 23 h	<u>1ay 2003</u> .						
2a) <u></u> ☐	This action is <b>FINAL</b> . 2b)⊠ Thi	s action is non-final.						
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.								
Disposition of Claims  A)M. Claim(a), 4.5 in/ora panding in the application								
•	4) Claim(s) 1-5 is/are pending in the application.							
4a) Of the above claim(s) is/are withdrawn from consideration.								
5)⊡ Claim(s) is/are allowed. 6)⊠ Claim(s) <u>1-5</u> is/are rejected.								
7)□	Claim(s) <u>1-5</u> is/are rejected.  Claim(s) is/are objected to.							
,		election requiremen	<b>+</b>					
8) Claim(s) are subject to restriction and/or election requirement.  Application Papers								
9) The specification is objected to by the Examiner.								
10)⊠ The drawing(s) filed on <u>01 May 2000</u> is/are: a)□ accepted or b)⊠ objected to by the Examiner.								
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).								
11) The proposed drawing correction filed on is: a) approved b) disapproved by the Examiner.								
If approved, corrected drawings are required in reply to this Office action.								
12) The oath or declaration is objected to by the Examiner.								
Priority under 35 U.S.C. §§ 119 and 120								
13)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).								
a)⊠ All b)□ Some * c)□ None of:								
	1. Certified copies of the priority documents have been received.							
	2. Certified copies of the priority documents have been received in Application No							
<ul> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>								
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).								
<ul> <li>a) ☐ The translation of the foreign language provisional application has been received.</li> <li>15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.</li> </ul>								
Attachment(s)								
2) 🔲 Notic	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449) Paper No(s)	5) Noti	rview Summary (PTO-413) Paper No ce of Informal Patent Application (P <sup>-</sup> er:					

Application/Control Number: 09/485,443 Page 2

Art Unit: 2181

### **DETAILED ACTION**

#### Claim Objections

1. Claims 1 and 3 start the node connection from the lowest priority, which contradicts from the illustration of the figures 2, 3D, and 3E. This office action will be written based on the illustration of the figures 2, 3D, and 3E. Further clarification is needed.

#### **Drawings**

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

## Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  - 1. Determining the scope and contents of the prior art.
  - 2. Ascertaining the differences between the prior art and the claims at issue.
  - 3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the "IEEE Standard for a High Performance Serial Bus", Gorin et al. (U.S. Patent No. 5,020,059), and Douceur et al. (U.S. Patent No. 6,247,061).

Referring to claim 1: The IEEE standard discloses that it is known to group the nodes with the same speed capacity adjacent to one another and to reduce the number of hops (section 8.4.6.2). The implementation of these two approaches for optimizing 1394 efficiency is beyond the IEEE standard's scope. Gorin teaches that it is known to minimize the tree depth (column 6, lines 31-33) for reducing the hops between the root and leaves; thus, it implicitly teaches placing the nodes with higher number of ports at the top of the tree. Douceur teaches that bandwidth reservation is known to guarantee resource (column 2, paragraphs 2-4). Since the isochronous transmission is a part of the 1394 features, the bandwidth reservation is a must practice; thus, the nodes at the top of the 1394 tree will need higher bandwidth to support the isochronous transmission. Hence, it would have been obvious to one having ordinary skill in the computer art to combine Gorin and Douceur's teachings to implement the 1394's optimizing principles because they enables one to minimize the number of hops and to support the 1394 isochronous transmission.

Referring to claims 2 and 5: Claims 1 and 3's arguments apply; furthermore, since the 1394 node's speed will be capped by the parent node, the priority is assigned to the higher speed node to support the full performance of the child nodes and the isochronous transmission.

Referring to claims 3-4: Claim 1's argument applies; furthermore, since it is known to one in the computer art that any given node in a serial bus within the tree topology, except the beginning node and the ending node, must have at least 2 ports for connecting to its parent node

Application/Control Number: 09/485,443

Art Unit: 2181

and child node (as illustrated in specification's figure 1); such that, It is obvious to one in the

computer art that a serial bus with N number of nodes will need to have at least 2N ports minus

one port from each of the beginning node and the ending node, which concludes the total number

of 2N-2 ports, which equals to 2(N-1) ports.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin King whose telephone number is (703) 305-4571. The

examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephones are unsuccessfully, the examiner's

supervisor, Mark Reinhart can be reached at (703) 308-3110.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose number is (703)-306-5631.

Justin King

August 7, 2003

GOPALC. RAY

Page 4

**GROUP 2390**